Sub-Element 2.a³/₄**Emergency Worker Exposure Control**

What the Policy Says

Intent

This sub-element derives from NUREG-0654, which provides that OROs have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans and procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any preestablished administrative reporting limits (that take into consideration Total Effective Dose Equivalent or organ-specific limits) identified in the ORO's plans and procedures.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4, J.10. e, f).

Minimum Frequency

Criterion 2.a.1 is to be evaluated every exercise.

Extent of Play

OROs authorized to send emergency workers into the plume exposure pathway EPZ should demonstrate a capability to meet the criterion based on their emergency plans and procedures.

Responsible OROs should demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.

As appropriate, OROs should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure, based on the ORO's plan and/or procedures or projected thyroid dose compared with the established Protective Action Guides (PAGs) for KI administration.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the Extent of Play agreement.

Preparing to Evaluate This Criterion

Before the exercise, determine, according to the ORO's plan/procedures and the Extent of Play agreement:

- Who will authorize exposure levels to emergency workers in excess of pre-authorized levels?
- What approach has been used to correct DRD readings to the correct Total Effective Dose Equivalent (TEDE) (e.g., the dosimeter correction factor)?
- Who makes the decision to authorize KI (for emergency workers, institutionalized, etc.) to be taken?

During the Exercise

During the exercise, in addition to evaluating activities related to the items listed above, be sure to:

- Observe whether decision-makers considered projected doses and likely exposure rate patterns before dispatching workers into the Emergency Planning Zone (EPZ).
- Note whether the decision-makers considered:
 - > Alternate entry and exit routes,
 - > Potential changes in meteorological conditions,
 - > Areas or roads to be avoided,
 - > What to do in the event of equipment and vehicle failure, and
 - Previous exposure(s) of personnel.
- Note whether the decision to use KI was based on projected thyroid dose compared with the established Protective Action Guides (PAGs) for KI administration.
- Note if the KI decision-making process involved close coordination among assessment and decision-making staff.
- Document that the correct dosimeter correction factor was used.